MICRO-ACTUATOR, HEAD GIMBAL ASSEMBLY AND MANUFACTURING METHOD THEREOF

FIELD OF THE INVENTION

[0001] The present invention relates to a disk drive unit and manufacturing method thereof, and more particularly to a micro-actuator and a head gimbal assembly and manufacturing method thereof.

BACKGROUND OF THE INVENTION

AC 1/24/07

[0002] Disk drives are information storage devices that use thin film magnetic media to store data. Referring to FIG. 1a and 1b, a typical disk drive in prior art has a drive arm 104 with a slider 203 mounted thereon and a magnetic disk 101. The disk 101 is mounted on a spindle motor 102 which causes the disk 101 to spin and a voice-coil motor (VCM) (not shown) is provided for controlling the motion of the drive arm 104 with the slider 203 and thus controlling the slider 203 to move from track to track across the surface of the disk 101 to read data from or write data to the disk 101.

[0003] However, Because of the inherent tolerance (dynamic play) resulting from VCM that exists in the placement of the slider 203, the slider 203 can not attain a position fine adjustment.

[0004] To solve the above-mentioned problem, piezoelectric (PZT) micro-actuators are now utilized to modify the placement of the slider. That is, the PZT micro-actuator corrects the placement of the slider on a much smaller scale to compensate for the tolerance of VCM and the drive arm 104. It not only